

Willenhall
Urban District Council.

ANNUAL REPORT

OF

MEDICAL OFFICER OF HEALTH

J. Percival Tildesley,

M.B. Lond., D.P H. Oxon., M.R.C.S. Eng., L.R.C.P. Lond.

FOR THE YEAR 1914.

Summary of Vital and Mortal Statistics

for 1914.

Area (land and inland water)	...	...	...	1,277 acres.
Population :—				
Census, 1911	...	...	...	18,858
Estimated, 1914	...	...	...	18,958
Number of inhabited Houses .—				
Census, 1911	...	...	...	3,812
End of 1914	...	...	...	3,898
Average Number of Persons per House	...	...	...	4·8
Density	...	...	...	14·8 per acre.
Births	...	...	...	547
Birth-rate	...	...	...	28·8
Deaths	...	...	...	299
Death-rate	...	...	...	15·7
Net Deaths belonging to the District	...	...	...	327
Net Death-rate, including deaths outside District	...	...	...	17·2
Zymotic Death-rate	...	...	...	1·7
Infantile Mortality per 1,000 Births registered	...	...	...	99·2

ANNUAL REPORT.

1914.

MR. CHAIRMAN AND GENTLEMEN,

I have the honour to submit to you the following report, which, by the aid of Vital Statistics given in Tables I to IV, may be regarded as a survey of the health of the Township, and the work done by your Medical Officer during the year ending December 31st, 1914.

Description of the district. Some historians are of opinion that the description of the village of Wodgate, given by Disraeli in his book "Sybil," refers to the present town of Willenhall. Whether that be so or not, it is remarkable that several of his statements apply equally well at the present day, particularly so such sentences as these—"It is a fact that the inhabitants of Wodgate early acquired a celebrity as skilled workmen," or, again, "As founders of brass and as locksmiths their fame has spread over to European Markets." Willenhall is situated on the Northern fringe of the Black Country, it is not *in* the Black Country, but has rural scenery towards Cannock and Sharesill, where once lived Frances Ridley Havergal.

It has Wolverhampton 3 miles to the West and Walsall $3\frac{1}{2}$ miles to its East, while away to the North the country gradually rises to Essington where the Holly Bank Colliery is a well-known landmark and finds employment for many hundreds of men.

Trade during the year was good, and especially so during the last 4 or 5 months. Whilst the principal industry of the town for a century has been the manufacture of Locks, Latches, Bolts, Keys, &c., yet the last few years has witnessed a gradual change, coincident with changing customs and conditions. Large Military and Naval

contracts are regularly received, also Steel Stampings of many kinds and Motor and Cycle fittings are largely made, and have become quite a new feature in Willenhall's industry.

The Weather. During the year the weather may be briefly described as follows: the first quarter was cold and stormy with little sunshine; in the second quarter April and May were warm and dry with plenty of sunshine, and in June sultry weather with heavy thunderstorms was the feature; the third quarter was on the whole fine and dry with very little rain; but in December the rainfall, as in other parts of England, was exceptionally heavy. In London and the South of England, the rainfall in December was the greatest on record, the Cambden Square record, now extending over 50 years, showing a total rainfall of 6·3 inches for the month. The wettest previous December in London occurred in 1876 and I should say that the experience of this district was similar. Whooping Cough now began to prevail, probably due to some extent, to climatic conditions.

The War and its effect upon Willenhall.

Great Britain declared War against Germany on August 4th, 1914, and I may summarise its influence on Willenhall, and upon its trade and people as follows:—

- (1st.) A Town's meeting was held, under the Chairmanship of Councillor Enoch Tonks, J.P., the result being that in a short time upwards of £2,000 was subscribed by the townspeople, and handed over to the National Fund started by the Prince of Wales, for relieving distress.
- (2nd.) Willenhall decided to follow the example of other Towns, and the Committee accepted the generous offer of Mr. Charles Pinson of his house in Moat Street. The Medical Officer of Health and the Surveyor having reported that the sanitary arrangements permitted of a party not exceeding 20 being accommodated, the house was quickly, and all by gratuitous offers, furnished and prepared as a Hostel for 13 or 15 Belgian Refugees. The town has guaranteed to maintain these for 1 year, should the War continue so long.

- (3rd.) A Committee, affiliated to the Sailors and Soldiers' Families Association ably coped with the weekly distribution of relief to families entitled, and also made the necessary enquiries and visits to the homes of Soldiers' or Sailors' families.
- (4th.) The Doctors and Chemists in the town agreed to act in accordance with the resolution of the British Medical Association and the Pharmaceutical Society and have given and are still giving their services gratuitously to the families of our Sailors and Soldiers.
- (5th.) As regards recruiting, few towns can compare with Willenhall; many more than 1,000 have recently enlisted, and it is estimated that nearly 2,000 are in the Army and Navy.
- (6th.) As regards the effect of the War on Willenhall trade, your M.O.H. was requested to act in co-operation with Lord Charnwood, as correspondent to the Intelligence Department of the Local Government Board on this matter, and our views are in complete agreement that, on the whole, trade in Willenhall has been good, several firms working overtime, wages satisfactory and that there was practically no unemployment.
- (7th.) In September the Local Government Board issued a circular to Local Authorities calling attention to the possibilities and risks of Infectious Diseases being spread, especially Small-Pox and Typhoid, owing to the movement of Troops and to the influx into this country of thousands of Refugees, and suggesting that immediate steps should be taken to ensure that the Isolation Hospital was in readiness. Accordingly on September 2nd, I inspected the Isolation Hospital and reported to the Sanitary Committee that it was in a satisfactory condition of repair and was, in fact, in complete readiness for the reception of 6 patients and 2 nurses, so that any sudden outbreak of Small-Pox could be at once checked.

Population. The Population of Willenhall estimated to June 30th, 1914, on the assumption of a continuance of increase by geometrical progression at the rate experienced during 1901—1911 is 18,958.

Birth and Death Rates. There were 544 births and 299 deaths registered in the district, equal to a Birth-rate of 28·6 and a Death-rate of 15·7 per 1,000 of the population per year, as compared with averages of 30·3 and 14·7 in the 10 preceding years.

The Nett birth-rate and death-rate of all belonging to the district, that is the rates, including “ *Transferable births and deaths* ” were respectively 28·8 and 17·2.

The Birth-rate, 28·6, was a decidedly low one ; in 6 of the last 10 years it was over 30, and in the decennium 1894—1903 the average was as high as 37·2 ; and, excepting, the year 1910, when it was 28·1, **the birth-rate is at the lowest level reached for the past 20 years.**

The following Table I have drawn up to shew at a glance the total number of births and deaths in Willenhall, and the birth and death-rates in Willenhall as compared with those of England and Wales generally, during the last 6 years :—

Year.	Willenhall total number of Births.	Willenhall Birth-rate per 1000 of the population.	England and Wales Birth-rate per 1000 of the population.	Willenhall total number of Deaths.	Willenhall Death-rate per 1000 of the population.	England and Wales Death-rate per 1000 of the population.
1909	563	28·5	25·6	334	16·9	14·6
1910	557	28·1	24·8	205	10·3	13·5
1911	544	28·6	24·4	297	15·6	14·6
1912	587	30·7	23·8	252	13·1	13·3
1913	607	32·0	23·9	320	16·9	13·7
1914	547	28·8	?	299	15·7	?

The Death-rate, viz., 15·7, I do not consider at all a high one ; it compares favourably with last year when it was 16·9, but it is slightly above the average of the last 10 years in Willenhall which was 14·7, and shows a marked improvement when compared with

the average of the 10 years 1894—1903, which was as high as 19·7.

Death Rates.

1914	...	...	...	15·7
1913	...	...	...	16·9
Average 1904—1913	...	...	...	14·7
Average 1894—1903	...	...	...	19·7

Zymotic Death Rate. The Death-rate from the 7 principal Infectious Diseases was 1·7 per 1000 per year, as compared with 2·1 in the 10 preceding years. The Zymotic Death-rate is usually 2 to 2·5 for the whole country, but is higher in insanitary towns and lower in places under good hygienic conditions, and although I am pleased to see this rate compare most favourably with past averages, yet I must admit, that I do not regard the Zymotic Death-rate as anything like a perfect index of sanitary conditions, seeing that it includes diseases that are not equally affected by the improved sanitation of the country

Infantile Mortality Rate. There were during the year 54 deaths of children under one year of age, giving an Infantile Mortality rate of 99·2 per thousand births registered, as compared with an average of 152·6 in the 10 previous years and with 191·8 in the decennium before that. It is a low rate for this, or indeed for any district, and the explanation is easily discovered when we consider what are the principal causes of death among infants under 1 year. It is known that over 20 per cent of the total deaths in infancy are due to the various infective diseases, amongst which in order of magnitude are Measles, Diarrhoea and Enteritis, and Whooping Cough. Well, during 1914 among the 54 deaths under 1 year there were only 3 from Whooping Cough, 5 from Diarrhoea and none at all from Measles; so that it is hardly to be expected that a rate approaching that of the present year can be maintained. At the same time, when we consider that the average for the past 10 years was as high as 152·6 per 1,000 births, and for the previous decennium was 191·8, we must admit that the steady reduction of this rate should be one of the chief aims of the sanitary authority.

The contrast of this year's Infantile Mortality rate with former years is seen better when tabulated, as follows :—

Year.	Infantile Death-rate per 1,000 Births.		
Average of 10 years, 1894 to 1903	191·8
Average of 10 years, 1904 to 1913	152·6
1914	99·2

A high Infantile Mortality rate is important, because, firstly it indicates a heavy loss of young lives by death. It is estimated that the actual number of children dying under 1 year in England and Wales each year is 120,000 ; and, secondly, the same conditions which kill 120,000 infants each year injure those who survive, so that they become defective children, and lastly, a high Infant Mortality rate means unhealthy homes.

It is therefore my duty to try to point out what are the causes in Willenhall that may tend to keep up this high rate.

To do this it is necessary to study Table IV. This shows that of the 54 infant deaths, 8 *i.e.*, 15% were due to Premature Birth and Atelectasis. These are due to causes at or before the birth of the child ; 7 or 13% occurred from Atrophy and Debility and were probably due to want of care in the early days of life. The various Infective Diseases, such as Scarlet Fever (1), Whooping Cough (3), Diphtheria (2), Diarrhœa (5), and Tuberculosis (4), accounted for 27·8 per cent. deaths. Bronchitis (9) and Pneumonia (3), regarded nowadays as Infective diseases, caused 22 per cent. of the deaths. Thus it is seen, while there are endless factors involved in the causation of infantile Mortality, factors such as Female Factory Labour, Alcohol, Unhygienic surroundings, Artificial instead of breast feeding, yet in Willenhall this important problem of saving child life consists principally in the prevention of Infectious Diseases, including Diarrhœa and Tuberculosis.

The Acute Infectious Diseases :

Ophthalmia Neonatorum. In February last the Local Government Board issued a regulation making Ophthalmia Neona-

torum a notifiable disease. The Regulation, which has effect throughout England and Wales came into force on April 1st, 1914.

The cases of Infectious Diseases certified during the year were as follows :—

Diphtheria	...	7	Erysipelas	..	16
Scarlet Fever	...	121	Typhoid Fever	...	1
Ophthalmia	...	1	Pulmonary Tuberculosis		85
Other Tuberculoses	...	...			28

Of cases of non-notifiable infectious diseases, I also received information of the following :—

Measles	...	...	19	Chicken Pox	...	111
Whooping Cough	...		48	Mumps	...	605

I have compiled the following Table, by study of past records, to show the number of Notifications of Infectious Diseases notified in Willenhall since 1904, and also the Rate per 1,000 of the population in each year :—

TABLE A.

Year.	Small Pox.	Diphtheria (including Membranous Croup).	Erysipelas.	Scarlet Fever.	Typhus.	Enteric Fever.	Puerperal Fever.	Ophthalmia Neonatorum.	† Pulmonary Tuberculosis.	Other Tuberculoses.	Totals	Rate per 1,000 of Population.
1	2	3	4	5	6	7	8	9	10	11	12	13
1904	—	8	12	39	—	5	1	—	—	—	65	3·4
1905	—	12	15	42	—	3	2	—	—	—	74	3·8
1906	—	8	21	168	—	10	6	—	—	—	213	10·9
1907	—	6	17	103	—	4	1	—	—	—	131	6·6
1908	—	22	14	107	—	8	—	—	—	—	151	7·6
1909	—	15	17	57	—	2	—	—	13	—	104	5·2
1910	—	6	13	19	—	4	—	—	7	—	49	2·4
1911	—	13	20	80	—	3	1	1	20	—	138	7·2
1912	—	6	13	39	—	3	—	1	76	—	138	7·2
1913	—	9	9	180	—	1	—	4	82	19	304	16·0
1914	—	7	16	121	—	1	—	1	85	28	259	13·6

† Poor Law cases of this Disease became notifiable on 1st January, 1909. Hospital cases became notifiable on 1st May, 1911, and all cases became notifiable on 1st January, 1912.

Scarlet Fever. The incidence of this disease to the population, or the Sickness rate, was 6·4 per 1,000, which is considerably higher than the average for England and Wales, which in 1913 was 3·5 and in 1912 was only 2·9 per 1,000

Multiple Cases of Scarlet Fever. I have made the following calculations showing the number of houses in Willenhall in 1914, in which Scarlet Fever occurred and the number of cases notified from each of these houses.

	No. of Houses.	Per cent. of Houses	No. of Cases.	Per cent. of Cases.
Houses in which 1 case occurred ...	74	79·6	74	61·1
Houses in which 2 cases occurred...	11	11·8	22	18·2
Houses in which 3 cases occurred..	7	7·5	21	17·4
Houses in which 4 cases occurred...	1	1·1	4	3·3
Totals	93	100	121	100

There were 6 deaths from Scarlet Fever, giving a fatality of 4·9 per cent. In recent years it is agreed that a milder variety than formerly has been noticeable, with a corresponding lower Death-rate, but in 1914 many of the cases were unusually severe and complicated with glandular enlargements, due to septic absorption from the throat. Such cases, of course, require the constant and careful attention of a nurse; such cases, if in a Fever Hospital would have their throats (the source of danger) frequently, perhaps hourly, swabbed out or syringed with an antiseptic solution; but of course, in hundreds of homes such treatment is impossible and the result is seen in a Death-rate of 4·9.

Willenhall has no Isolation Hospital for Scarlet Fever, though in the near future, I understand it will be compulsory to join several surrounding districts in a joint Fever Hospital scheme.

Typhoid Fever. There occurred only 1 case of Typhoid Fever during the year ; this was in Stringes Lane and no satisfactory cause could be discovered. This is the 6th year in succession in which there has been no death from Typhoid, a most gratifying fact.

Diphtheria. There were 7 cases during the year, and of these 2 were fatal, both being in infants under 1 year. The cases occurred in various parts of the town and in every instance it was impossible to trace any insanitary defect as a likely cause. In 2 cases I received confirmatory Bacteriological reports from Prof. Leith of Birmingham University. In 3 of the cases Antitoxin was administered.

Measles. The district was, most fortunately, free from this malady in 1914 ; there were 19 cases, and no death. It is this freedom from Measles that explains the unusually low Infantile Mortality Rate (99·3), reference to which I have already made, and the comparative absence of Measles in 1914 was due to the fact, that there were nearly 600 cases in the previous year and those who recovered were rendered immune from further susceptibility.

My views with regard to Measles are very similar to those I hold concerning the control of Whooping Cough, so that any remarks I make concerning one applies equally to the other. Anything that can be done to impress upon the mind of every mother that these 2 diseases are amongst the most dangerous and fatal of all, should be done.

During the last 2 years Measles caused 23,308 deaths in England and Wales, and Whooping Cough in the same 2 years caused 13,734 deaths.

Whooping Cough. In 1914 there were 48 cases of Whooping Cough in Willenhall, 42 of which occurred in the last few weeks of the year. There were 4 deaths, giving a Death-rate of 21 per 100,000, compared with 14 per 100,000, the Death-rate for England and Wales.

As to the preventive measures to adopt against Whooping Cough, we are met with the same difficulty as in Measles, viz.—that it frequently remains unrecognised during the first 14 days of the attack. An interesting Bacteriological fact connected with Whooping Cough, is that quite recently the Specific germ is supposed to have been discovered—the *Bacillus Pertussis* of Bordet ; it is stated that this germ is present in the expectoration, and that it is only present during the first fortnight. If that be so, it explains why Whooping Cough is more infectious in the early stages, although, personally, I should hardly be prepared to agree with recent writers, that its infectivity disappears after a fortnight.

In order to check or stamp out Whooping Cough, my views are that the **first case** in a family should be compulsorily notifiable. This has already been advocated by several County Councils. This duty of notifying the first case of Whooping Cough and of Measles should be imposed both on the Doctor in attendance, the Parents, and the Head-teachers in every school. For notification to be of the slightest use, of course, the Local Sanitary Authority must arrange for the house to be visited, and this would almost surely mean an increase in the Staff.

It may be some time yet, before my views find favour, and become practical actualities, but I am convinced, that by such means the fatality of Whooping Cough could be greatly reduced.

Tuberculosis. There were during 1914, 85 cases of Pulmonary Tuberculosis notified and 28 cases of Tuberculosis of other parts—a total for all forms of 113 cases. Of these, however, 32 had been reported upon in previous years, so that really only 81 fresh cases were brought to light. In 1913 the new cases numbered 96, so that there is an improvement. Of the deaths from Tuberculosis 17 occurred within the district compared with a total of 19 in 1913, and the **total number** of deaths from Pulmonary and from other Tuberculoses was 29, the same number as in 1913, giving a Death-rate of .9 and of 1.5 per 1,000 of the Population.

			Pulmonary.	Pulmonary plus other forms.
In 1911 the rates were	...	·9	and	1·3
In 1912 ,, ,,	...	·8	and	.94
In 1913 ,, ,,	...	1·0	and	1·5

However, in addition to these Tuberculous deaths which occurred in Willenhall, 5 Tubercular deaths occurred in Willenhall people outside the district, making the totals up to 21 Pulmonary, and 10 Tubercular Meningitis. However, the Death-rate from Tuberculosis varies very much, according to a number of circumstances which have to be carefully considered ; it varies much according to age and sex ; it is affected by environment ; it is higher in Urban than in Rural areas ; higher where overcrowding exists, lower where pure air is recognised as a necessity.

The reports of the Medical Officer to the Local Government Board show a steady decline in the Death-rate from Tuberculosis since 1901. It is a very common cause of death in childhood. Two important investigations that have recently been conducted, show that in *children*, infection by the Bacilli of human type is much more frequent than infection by the Bovine type ; these scientific investigations in plain English mean, that while the danger of cow's milk as a cause of Tuberculosis in childhood is proved, yet of *greater* importance is infection from human sources, *i.e.*, from some other consumptive individual.

As to Milk:—during the past year, I have twice personally visited and inspected all the Dairies in the District and found them in a fairly good condition.

For several years past proposals for additional legislation to control the production, distribution and sale of milk have been under consideration, and now the new Milk and Dairies Bill has become law. By its means more systematic control will be exercisable over that part of children's Tuberculosis due to infected milk, than has hitherto been possible.

Notification of Tuberculosis. As regards this part in the necessary preventive machinery, we must constantly remember, that for the good to come from Notification, that was originally intended,

it is absolutely essential as part of the scheme that each "Notification" should be immediately followed up by visits of inspection and oversight.

I have not heard of any instance in this town of Notification of Tuberculosis leading to any unpleasant results, as was anticipated might arise, such as dismissal of an employee or a Teacher.

Notification, then, with visits and even re-visits to the patient, is an essential in the preventive scheme; such re-visits are most important in giving the opportunity of impressing the necessity of separate sleeping accommodation.

Tuberculosis Officers:—Another part of the general preventive scheme is the appointment of Specialists, whose sole duty is the care of and control over, the giving of advice to, and the administering of Tuberculin to, those cases referred to them. In most areas, now, such officers are appointed and are doing good work, work that, in former days, I fear remained altogether undone. I cannot do better here than quote the words of Dr. Reid, the County Medical Officer. He says, "One important matter is the progress which has been made in putting into operation the scheme for dealing with "Tuberculous persons. Under the scheme, a central Sanatorium "to accommodate at least 100 patients will be erected on an "excellent site within 3 miles of Wolverhampton." In 1914 the Staffordshire, Wolverhampton and Dudley Committee had 103 beds at their disposal, and in September last Dr. Reid stated that "One hundred and three persons were receiving Sanatorium "Treatment and 268 persons are regularly attending the Tuberculin "Dispensaries," and the further fact that there are now 104 approved Sanatoria, or special Consumptive hospitals in the country, containing 5,398 beds, leads me to believe that in the near future we shall have a perfected machinery.

Personal Inspection of the District. This year I have devoted much time to personal visits of inspection, and have thus, in company with the Sanitary Inspector, been able to make examinations

of **the sanitary conditions of the homes** of hundreds of the people, and, as regards Tuberculosis, whenever Notification is received, the case is visited, enquiries made as to possible cause, advice given with regard to personal habits, the necessity of fresh air and open windows day and night ; cards of instruction are left and disinfectants supplied. After removal or death the house is fumigated, &c.

The Sanitary Committee also adopted my suggestion, that each Tubercular patient should be provided gratuitously with a Sputum-cup, which he could carry in his pocket, and thereby avoid the need of spitting in the Streets.

I must testify to the fact that the two District Nurses have done excellent work in attending on Tuberculous cases in Willenhall during the year, and I should warmly support any steps that could be taken toward obtaining a third Nurse.

Notification of Births Act. I advise the Council to adopt the Notification of Births Act, but only to do so, if they are prepared at the same time, to engage the services of a Lady Health Visitor.

At the Annual Conference, on the Prevention of Consumption, in May, Sir William Osler spoke as follows :—“ There are 3
“ essentials in its cure; education, control and rigid regimen. As
“ there is only room for one-third of the present cases in
“ Sanatoria, much must be done **in the homes**. The splendid
“ efforts of Officers of Public Health had, in the last 50 years, cut
“ in half the Mortality from Tuberculosis. They had tracked the
“ enemy and knew his stronghold, and they knew his 3 allies :—
“ poverty, bad housing and drink ; but, by co-ordination, co-
“ operation and enterprise, we should win just as surely as we
“ had won against Typhus and Typhoid.”

Housing. In April last Dr. Reid kindly wrote me concerning 3 houses, that had been reported to him by the School Medical Inspector as being overcrowded.

The houses were as follows :—a house in **Court 2, North Street, Portobello**. I had it inspected, and I also found that a month

previously I had visited and reported upon these same premises. The house was very damp and insanitary and is now closed.

The second case was at **14, Wood Street**, and here I found that the sanitary conditions were fairly satisfactory; there was through ventilation and open surroundings. However, there was a large family and consequently fresh arrangements have had to be made and the overcrowding no longer exists.

In the third case, at **Garden Lane, Portobello**, there was similarly, no doubt as to the overcrowding. It has been abated, at any rate, temporarily; but here, as in many cases, comes in the difficulty of the family obtaining a suitable house at a suitable rental.

In the **Inspection of the District** that I have made this year, and which I have previously referred to, I was gratified on the whole, with the aspect of improvement that is noticeable in most of the streets of the town; and with the comparative freedom from overcrowding.

Town Improvements during 1914. I hear that the contract for the demolition of the property in Walsall Street and Leve Lane, also Mr. Ely's premises on the Midland Railway approach, and the 5 houses situated at the corner of the Croft and Stafford Street, has now been settled, and the whole of this property has to be pulled down within a period of two months, and the work for the street-widenings will then be executed. The object of the above appears to be two-fold, in that it not only provides very desirable street-improvements, but it removes what may well be regarded as a very undesirable collection of property in the centre of the population.

The Widening of Morfital Lane is certainly one of the best efforts of the Council this past year, and, should the opportunity present itself, of completing the original plan in its entirety, of carrying through the improvement into Stafford Street, the Council will, I am sure, not hesitate to complete the good work already done

The improvement at the top of the Doctor's Piece is one of the greatest importance ; the Council's action in pulling down the old Church Schools, and their further action in deciding not to build upon that site, has provided **an open space in the very heart of the town**; the area of this space is 1,800 square yards, and the width of the streets adjoining add a further 1,500 square yards, giving an air-space of nearly $\frac{3}{4}$ of an acre—an asset to the town of the greatest value!

I am in entire sympathy with, and heartily approve of what appears to be, the object of the Surveyor, Mr. T. Edgar Fellows, in rounding off awkward street corners and dangerous curves in busy thoroughfares ; typical examples of the former which have been carried into effect this year, are at the corner of Bilston Street and New Road ; Monmore Lane and St. Anne's Road ; and a dangerous curve has been removed in Field Street ; the value of the latter will be more generally appreciated, when that street is carried through into Stafford Street.

Sewage Disposal. During the year 44 houses were connected to the deep sewer ; 19 new sewer connections were carried out ; 32 clean water closets with flushing tanks were fitted ; 33 waste water closets were added ; 14 ashpits were abolished ; 23 privies were also abolished and the same number of clean water closets in place of privies were finished.

Sewage Disposal Works. Probably by the time my report is printed the new Sewage Disposal Works will have been opened, as very little remains to be done at the time of writing, except for the Contractors to clear up minor items. The Works seem to me to be very complete ; the latest addition being a fully equipped Laboratory for the use of the Chemist who has charge of the Works—which is a sine qua non in any modern scheme of sewage disposal in a town of 20,000 inhabitants.

Fire Alarms. It is generally admitted that the Council has acted wisely in having quite recently had installed throughout the district the " Knight " system of Fire Alarm calls.

At the present moment there are 4 public alarm boxes and also call-bells for 16 Firemen.

As the alarm comes into the Fire Station it is automatically passed to the Firemen, the exact time is recorded and the locality indicated.

Certificates to Elementary School Authorities advising exclusion from School of Scholars living in infected homes, for specified periods, were sent by me as follows :—

Portobello	...	...	...	204
St. Giles'	...	...	...	39
Central	...	...	...	109
Little London	...	...	...	226
Albion Road	...	...	...	180
St. Mary's	...	...	...	28
St. Anne's	...	...	...	73
Walsall Road	...	...	...	130

On September 23rd, I advised closure for 3 weeks of the Girls' Department of the Albion Road Schools and also the Infant Department of St. Anne's Schools, owing to the prevalence of Mumps amongst the children attending those Schools.

During closure the Schools were thoroughly cleansed and disinfected.

Dairies and Milkshops. Regular examination of these has been made, and generally speaking I found the conditions satisfactory.

There are 5 Cowsheds in the district.. They are mostly of the old type, although one of them has been reconstructed within recent years. They are lime-washed at frequent intervals, and endeavours are made to keep them well ventilated, and manure removed frequently.

The object of my visits, is chiefly to educate the owners to the necessity of clean udders, clean hands, and thus a clean and pure milk supply.

There are 96 Milkshops on the register inclusive of retailers who trade in the district.

There are 14 Slaughter-houses, of which 3 are licensed ; they are kept in good order and in a reasonable state of repair.

There is one Common Lodging House situated on the Walsall Road, and registered for 37 males. I found it in a perfectly satisfactory condition.

Water Supply. Willenhall is supplied with water from the Wolverhampton Corporation's Mains, obtained from Artesian Wells.

On several occasions during the year, I have tested the tap water of the Willenhall supply, and on each occasion have found it free from both "Albuminoid" and from "free" Ammonia—indicating the absence of vegetable or animal pollution.

The Steam Disinfecter at the Disinfecting Station was worked on 106 days ; 724 articles of bedding, clothing, &c., were disinfected by steam at the Station ; and 143 rooms were fumigated by means of Sulphur or Formalin lamps ; 5 school departments were also fumigated by Sulphur (powder) and afterwards cleansed during closure for Infectious Diseases.

The Sanitary Inspector's statement of his action under the Housing and Town Planning Act, and the steps taken by the Council during the year, classified in accordance with the Local Government Boards' Regulations, 1910, is as follows:—

*Number of houses inspected and reported to Committee	...	466
" " " " as unfit for occupation		5
" " " " for closing orders	...	13
Number of houses in which the defects have been remedied	...	80
" " " " not "	..	31
" re-inspections or secondary visits respecting out-		
standing work	... ..	271
" closing orders issued in respect of 13 houses	...	12

* Of these 355 were satisfactory or in a reasonable state of repair, and 111 contained defects which were dealt with under the Public Health Act or Section 15, 17 or 18 of the Town Planning Act.

Of these ;—

1 has been closed	...	...	...	...	1
3 are being repaired			...	...	3
and in 8 houses the work has been carried out	...				8
taken down	...	...	...	...	2
„ for “ other improvements ”	...				2
„ for works extensions	...	...			7

Other matters—Bull's Head property in Wolverhampton Street is still void and under consideration. 2, 3 and 4 Leve Lane are void and will shortly be demolished

Defects classified according to Article 2 of L.G.B. regulations :—

1—Water supply	...	...	0	complied with	0
2—Closet accomodation	...		0	„ „	0
3—Drainage	...	...	1	„ „	1
4—Dwelling house as regards					
light, damp, &c.	...	...	75	„ „	53
5—Dwelling house as regards					
paving, &c.	...	...	5	„ „	3
6—Dwelling house as regards					
Ashpits, &c.	...	...	2	„ „	2
7—Dwelling house as regards					
Sec. 17, Sub-Sec. 7	...		0	„ „	0
8—Dwelling house as regards					
other defects	...	...	28	„ „	23

A summary of the Sanitary Inspector's work will be found in Table V.

The following work has been carried out during 1914. —

New houses erected or in course of erection	...	38
Houses connected to the deep sewer	...	44
Number of Sewer connections carried out by		
the Sur. Dept.	...	19
Number of clean Water Closets with flushing tanks	...	32
Number of waste Water Closets	...	33

Number of privy cess-pits provided to 2 new works (no sewer near)	2
Number of Ashpits abolished during the year ...	14
Number of Privies ,, ,, ,,	23
Number of dustbins provided ,, ,, in place of ashpits	19
Number of clean water closets in place of privies	23
Number of waste ,, ,, ,, ,, ...	1
Number of waste ,, ,, abolished and premises taken down	2

Food Inspection :—During the year, several small quantities of meat have been voluntarily surrendered; and destroyed by the Local Authority, owing to their being unfit for human consumption.

It is with pleasure that I acknowledge the courtesy and assistance that I have received from every Member of the Staff during the year.

I append Tables I to IV as required by the Local Government Board, and also those required by the County Council and the Home Office.

I am, Gentlemen,

Yours obediently,

J. PERCIVAL TILDESLEY,

Willenhall,

M.B. Lond., D.P.H.,

February 15th, 1915.

Medical Officer of Health.

Table I.

Vital Statistics for 1914 and Previous Years.

Year.	Population estimated to middle of each year.			Births.		Total Deaths Registered in the District.		Transferable Deaths*		Nett Deaths belonging to the District.		
	Un-corrected Number	†	Nett.	Number	Rate.	Number.	Rate.	of Non-residents registered in the District.	of Residents not registered in the District.	Under 1 Year of Age	At all Ages.	Rate per 1000 Nett Births.
1	2	3	4	5	6	7	8	9	10	11	12	13
1909	18,919	563	563	29.7	334	17.6	0	47	100	177.6	381	20.1
1910	18,954	557	557	29.3	205	10.8	0	31	56	100.5	236	12.4
1911	18,981	542	544	28.6	297	15.6	2	51	99	181.9	346	18.2
1912	19,118	584	587	30.7	252	13.1	1	38	77	131.7	289	15.1
1913	18,923	606	607	32.0	320	16.9	0	51	101	166.3	371	19.6
1914	18,958	544	547	28.8	299	15.7	0	28	54	99.2	327	17.2

* "Transferable Deaths" are deaths of persons who, having a fixed or usual residence in England or Wales, die in a district other than that in which they resided.

The following special cases arise as to Transferable Deaths:—

(1) Persons dying in Institutions for the sick or infirm, such as hospitals, lunatic asylums, workhouses and nursing homes (but not almshouses) must be regarded as residents of the district in which they had a fixed or usual residence at the time of admission. If the person dying in an Institution had no fixed residence at the time of admission, the death is not transferable. If the patient has been directly transferred from one such Institution to another, the death is transferable to the district of residence at the time of admission to the first Institution.

(2) The deaths of infants born and dying within a year of birth in an Institution to which the mother was admitted for her confinement should be referred to the district of fixed or usual residence of the parent.

(3) Deaths from Violence are to be referred (a) to the district of residence, under the general rule; (b) if this district is unknown, or the deceased had no fixed abode, to the district where the accident occurred, if known; (c) failing this, to the district where death occurred, if known; and (d) failing this, to the district where the body was found.

† This column shows the total number of births supplied by the Local Registrar, after the addition or subtraction of transferable births furnished by Registrar-General.

Area of District in acres (land and inland water) } 1,277

Total population at all ages } 18,858
Number of inhabited houses } 3812
At Census of 1911

Table 2.

Cases of Infectious Disease Certified or Notified during the year 1914.

Notifiable Disease.	At all Ages	At Ages—Years.							Total Cases Removed to Hospital.
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and upw'ds	
Small-pox ... ..	...							
Cholera ... ..	...							
Diphtheria (including Membranous Croup)	7	2	1	4					
Erysipelas	16			2		7	6	1	
Scarlet Fever	121	7	37	69	5	3			
Typhus Fever ... ..	...							
Enteric Fever	1			1					
Relapsing Fever ... ..	...							
Continued Fever ... ..	...							
Puerperal Fever .. ...	...							
Plague ... ..	...							
Ophthalmia Neonatorum	1	1							
Pulmonary Tuberculosis	85			36	10	31	8		
Other forms of Tuberculosis	28	4	2	15	5	2			
Totals	259	14	40	127	20	43	14	1	

Number of beds at Small Pox Isolation Hospital ... 14

Table 3.

Causes of, and Ages at Death during the Year 1914.

Causes of Death.		Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.								Total Deaths whether of "Residents" or "Non-Residents" in Institutions in the District.	
All causes	I									10	11
		All Ages	Under 1 year	1 and under 2 years	2 and under 5 years	5 and under 15 years	15 and under 25 years	25 and under 45 years	45 and under 65 years		
All causes	{ Certified Uncertified	2	3	4	5	6	7	8	9	10	
		327	54	14	17	16	16	66	71	73	
1. Enteric Fever	...										
2. Small Pox	...										
3. Measles	...										
4. Scarlet Fever	...	6	1	2	2	1					
5. Whooping Cough	...	4	3	1							
6. Diphtheria and Croup	..	2	2								
7. Influenza	...	4							3	1	
8. Erysipelas	...										
9. Phthisis (Pulmonary Tuberculosis)	...	21					5	14	2		
10. Tuberculous Meningitis	...	10	3	1	1	4		1			
11. Other Tuberculous Diseases	...	3	1				2				
12. Cancer, malignant disease	...	17						5	7	5	
13. Rheumatic Fever...	...	1				1					
14. Meningitis	...	3	1		2						
15. Organic Heart Disease	...	22					2	5	11	4	
16. Bronchitis	...	46	9	1	4			4	11	17	
17. Pneumonia (all forms)	...	30	3	1	5	3	3	10	4	1	
18. Other Diseases of Respiratory Organs		7				1		2	2	2	
19. Diarrhoea and Enteritis	...	21	8	8	2	1		1	1		
20. Appendicitis and Typhlitis	...	4						1			
21. Cirrhosis of Liver...	...	1				3					
21a Alcoholism	...										
22. Nephritis and Bright's Disease..	...	20				1		5	13	1	
23. Puerperal Fever	...	2						2			
24. Other accidents and diseases of Pregnancy and Parturition ... }		6						6			
25. Congenital Debility and Malformation, including Premature Birth... }		17	17								
26. Violent Deaths, excluding Suicide	...	7	2			2		1	1	1	
27. Suicide	...	1							1		
28. Other Defined Diseases	...	42	2		1		3	9	11	16	
29. Diseases ill-defined or unknown	...	30	2						3	25	
		327	54	14	17	16	16	66	71	73	
Sub-Entries.											
14a Cerebro-spinal Meningitis											
17a. Pneumonia											
28a. Poliomyelitis											

included
in above
figures.

Table 4.
INFANT MORTALITY 1914.

Nett Deaths from stated causes at various Ages under 1 Year of Age.

CAUSE OF DEATH.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 4 Weeks.	4 Weeks & under 3 Months.	3 Months & under 6 Months.	6 Months & under 9 Months.	9 Months & under 12 Months.	Total Deaths under 1 Year.
ALL CAUSES.	Certified...	10	3	2		15	8	8	13	10	54
	Uncertified ...										
Small-pox	...										
Chicken-pox	...										
Measles	...									1	1
Scarlet fever	...									1	3
Whooping Cough	...							2		2	2
Diphtheria and Croup	...										
Erysipelas	...										
Tuberculous Meningitis	...							1	1	1	3
Abdominal Tuberculosis	...									1	1
Other Tuberculous Diseases	...										
Meningitis (<i>not Tuberculous</i>)...	...							1			1
Convulsions	...	1	1			2	1	1		1	5
Laryngitis	...										
Bronchitis	...			1		1	3		3	2	9
Pneumonia (all forms)	...							2		1	3
Diarrhoea	...								5		5
Enteritis	...								1		1
Gastritis	...						1				2
Syphilis	...										
Rickets	...										
Suffocation, overlying	...			1		1		1			2
Injury at Birth	...										
Atelectasis	...	2				2					2
Congenital Malformations	...										
Premature Birth	...	5	1			6			1		6
Atrophy, Debility and Marasmus	...	2	1			3	3				7
Other Causes	...								1		1
TOTALS	...	10	3	2		15	8	8	13	10	54

Nett Births in the year	Legitimate ...	528
	Illegitimate ...	16
	Legitimate Infants ...	53
Nett Deaths in the year of	Illegitimate Infants ...	1

Table 5.

Summary of Work by Inspector of Nuisances
partly under my supervision.

				Inspections made.	Informal Notices.	Formal Notices.	Number of Nuisances.	Nuisances abated after Informal Notice.	Nuisances abated after Formal Notice.	Prosecutions.
Dwelling	}	Foul Conditions	...	108	81	12	81	64	8	
Houses		Structural Defects	...	179	130	3	130	98	3	
and		Overcrowding	...	88	53	9	53	46	9	
Schools		Unfit for Habitation...	...	27	13	13	13	2	9	
Dairies and Milkshops			...	20						
Cowsheds			...	13	4		4	4		
Bakehouses			...	43	3	1	4	3	1	
Lodging Houses			...	7						
Other Workshops and Factories			...	86	30	2	30	18	2	
Slaughter-houses			...	151	10		10	10		
Ashpits and Privies			...	569	32	3	32	19	2	
Deposits of Refuse and Manure			...	57	28	2	28	26	2	
Water Closets			...	489	151	5	159	147	5	
House Drainage	}	Defective Traps	...	18	14		14	11		
		No Disconnection	...	1	1		1	1		
		Other Faults	...	145	61	5	61	43	4	
Water Supply			...	5	3		3	2		
Pigsties and Pigs			...	5	3		3	2		
Animals			...	22	18	1	18	18	1	
Smoke Nuisances			...	9	5	1	5	4	1	
Other Nuisances			...	66	54	3	54	43	1	
Seizures of Unwholesome Food				...	...	...	...	...	...	0
Condemned as Unfit for Food				...	...	...	...	...	...	0
Samples of Water taken for Analysis				...	...	...	...	...	...	0
Lots of Infected Bedding Disinfected				...	...	...	...	...	...	724
Rooms Fumigated after Infectious Disease				...	...	...	...	...	...	143
School Disinfected				...	...	...	...	...	...	5
Formal Notices in 1913, complied with in 1914				...	...	...	...	...	...	9
Formal Notices in 1914 not yet complied with				...	...	...	...	...	...	11

Table 6.

Abstract of Particulars asked for by Home Office.

Factories—Inspections	...	...	32	Noticcs	...	4
Workshops—Inspections	...	...	97	Notices	...	30
Defects found :							
Want of Ventilation	...	...	1	Remedied	...	1
Want of Cleanliness	...	...	26	„	...	18
Other Nuisances	...	...	2	„	...	2
Sanitary accomodation	...	...	2	„	...	1
Breach of sanitary requirements							
in Bakehouses	...	...	3	„	...	0
Other offences	...	...	0			
Other Matters ;—							
Notified by H M. Inspector	...	...	...	...	...	7
Reports to H.H. Inspector of action taken	...	...	...	...	...	5
Other—new workshops	...	...	...	...	...	16
Underground Bakehouses in use	...	...	...	...	...	0
Homework :—							
Lists received	}	once	...	2	Outworkers	...	6
		twice	...	6	Outworkers	...	37
Workshops on Register at end of 1914—327. Occurred 277.							
Chief Trades therein :							
Lock, Key and Latch Manufacture	...	...	...	...	...	148
File-cutting	...	...	...	...	...	8
Other Hardware Manufacture	...	...	...	...	...	5
Articles of Dress	...	...	...	...	...	18
Workers in Wood and Iron	...	...	...	...	...	43
Bakehouses	...	...	...	...	...	17
Sundry Trades	...	...	...	...	...	38
Void—General Trades	...	...	...	...	...	46
Void—Bakehouses	...	...	...	...	...	4

327

Factories on the Register—63. Occupied—63.